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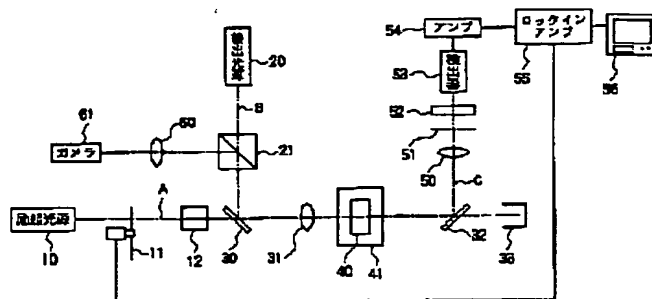
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TITLE : PHOTOTHERMAL TRANSDUCTION
SPECTRAL ANALYZER



ABSTRACT : PROBLEM TO BE SOLVED: To provide a photothermal transduction spectral analyzer by which a detection with high sensitivity can be performed.

SOLUTION: Exciting light A which is output from an exciting light source 10 and which is changed into a ring-belt luminous flux by a ring-belt luminous-flux formation part 12 is transmitted through a dichroic mirror 30. On the other hand, detecting light B which is output from a detecting light source 20 is reflected by the dichroic mirror 30. The exciting light A and the detecting light B are radiated from the dichroic mirror 30 in such a way that their luminous fluxes are not overlapped with each other so as to be coaxial. When the detecting light B is incident on a thermal lens which is generated by irradiating a sample with the exciting light A, signal light C is generated. The signal light C is detected by a detector 53 so as to be changed into a current signal via a dichroic mirror 32, a condensing lens 50, a pinhole 51 and a filter 52, the current signal is converted into a voltage signal by an amplifier 54, and the voltage signal is detected by a lock-in amplifier 55 so as to be synchronized with the modulation cycle of the exciting light A in a chopper 11.

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